## **Personal Details**

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Telephone: +49 176 42079463

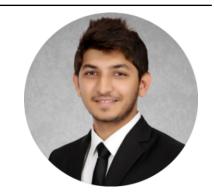
E-Mail: <a href="mailto:rajit.msanghvi@gmail.com">rajit.msanghvi@gmail.com</a>

Birth Date: 01. June. 1995

Nationality: Indian Family Status: Single

<u>GitHub:</u> <a href="https://github.com/sanghvirajit">https://github.com/sanghvirajit</a>

<u>Portfolio:</u> <a href="https://sanghvirajit19.github.io/Portfolio/">https://sanghvirajit19.github.io/Portfolio/</a>



# Research/ Work experience

10/2020 - current

#### Research Associate, Institute of Mathematics and Computer Science

Universität Koblenz-Landau, Koblenz, Germany.

- Successfully researched and developed C++ code to perform the PDE constrained optimization problem using multigrid methods.
- Generated the neural networks from scratch in Python to understand the vanishing gradient problems.
- Ongoing research to develop the code to solve PDE constrained optimization problem as
  a machine learning problem using Automatic differentiation and SciPy optimization
  python library.

09/2021 - current

### **Data Scientist Graduate Trainee, Machine Learning Bootcamp**

#### DataTalks.Club, Berlin

- O Preparing the data and doing EDA, analyzing important features.
- Developed Credit risk analysis model with Decision Tree, XGboost, and random forest.
- Developed Insurance fraud claim model with XGBoost, LightGBM and CatBoost, and deployed the models on the AWS cloud service by creating Docker containers and using AWS Elastic Beanstalk.

**Projects** 

03/2021 - current

#### **Technical writer and contributor**

## Neptune.ai and Medium

I write about Data science, machine learning and deep learning.

Neptune.ai Blogs Medium Blogs

05/2020 - 09/2020

# Internship, Research and Development

Simerics GmbH, Rottenburg am Neckar, Germany.

- Developed Python library for mixed timescale coupling using Python packages like NumPy, Pandas, Matplotlib, and Seaborn.
- Successfully Implemented numerical Fluid-Structure Interaction (FSI) coupling algorithms for FSI coupling adapters in Python and improved the overall Simulation time by 10%.

05/2019 - 11/2019

## Master's thesis, Department of Internal Combustion Engine Simulation.

#### IAV GmbH, Chemnitz, Germany.

- O Developed and executed the model method succefully to investigate the Turbine Downstream to increase the turbine pressure ratio and thus the turbine performance.
- Effectively and efficiently performed meshing, and 3D- CFD simulations of the models using CFD-tool StarCCM+.

10/2018 - 03/2019

#### Internship, Industrial Hydraulics Department.

#### Bosch Rexroth AG, Lohr am main, Germany.

Optimized the shape of hydraulic valves and pumps, and decreased the pressure drop by 18% using the adjoint shape optimization method with CFD simulation.

09/2016 - 09/2017 Design Engineer, Hydraulic Control Department.

Bosch Rexroth (India) Pvt Ltd.

- Trained to design and test industrial hydraulic valves.
- Created 2D/3D technical drawings with CAD programs.

## **Education**

10/2017 - 09/2020 M.Sc. Computational Engineering

Ruhr-Universität Bochum, Germany

Abschlussnote: 1.6

06/2012 - 03/2016 Bachelor of Technology in Mechanical Engineering

Indus Universität, India Abschlussnote: 9.22/10

# IT/ EDV Knowledge

O **Programs**: MS Word, MS Excel, MS Power Point – very good.

- Machine Learning Frameworks: Keras, TensorFlow, PyTorch, und Scikit-Learn good.
- Programming Languages: Python Very good, C++ Very good, SQL good, and Matlab good.
- Linear Algebra und Visualization: Python-Library Numpy, Pandas, Matplotlib, Seaborn very good.
- Web-based Visualization: Interactive Dashboard with Plotly Python, und Dash good.
- Statistics: Python, SPSS good.
- O Data-based management: RDBMS PostgreSQL good.
- O Software/Tools: Docker good
- O Cloud services: AWS Elastic Beanstalk good
- O Data accumulation und Visualization: Web-Scraping with Beautiful Soup good.
- Operating systems: Window, Linux very good.

# Languages

- German B1, Fluent in speaking and writing.
- English Mother tongue.

## **Certifications**

Oct 2021 IBM certified Data Science Professional

Capstone Project

May 2021 The Complete SQL BootCamp 2021 – Udemy

## Volunteering Experience

02/2018 - 03/2019 Vice President, Student Council

Ruhr-Universität Bochum, Germany

#### **Awards**

2017 Gold Medal

Indus Universität, India

Awarded for academic excellence in the bachelor's degree program.

Koblenz, 10/2021

(Banglini)